

IN THE CLAIMS:

Please amend Claims 1, 2, 10, 11, 19-22, 25, and 27 and add new Claim 34 as follows.

1. (Currently Amended) An image sensing apparatus including image sensing means for sensing an object and embedding means for embedding predetermined data in image data obtained by the image sensing means, comprising:

a table memory which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means and a plurality of embedding modes to be used in the embedding means, each of the plurality of embedding modes having different robustness from each other, where the image quality and the robustness have an inversely proportional relationship;

mode selection means for manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means; and

robustness selection means for ~~automatically deciding, referring to said table memory~~ in accordance with ~~the image quality corresponding to~~ the manually selected image sensing mode, and automatically selecting a robustness specified by one of the plurality of embedding modes, which corresponds to the manually selected image sensing mode ~~one of a plurality of embedding modes to be used in said embedding means, each of the plurality of embedding modes having different robustness from each other, wherein the image quality and the robustness of the decided embedding mode have an inversely proportional relationship;~~

wherein the image sensing means senses an image having an image quality corresponding to the manually selected image sensing mode, and

wherein said embedding means executes, after said image sensing means senses an image the embedding of the predetermined data in the currently sensed image data obtained by the image sensing means in accordance with the embedding mode corresponding to the automatically selected robustness ~~corresponding to the decided embedding mode.~~

2. (Currently Amended) An image sensing apparatus including image sensing means for sensing an object and embedding means for embedding predetermined data in image data obtained by the image sensing means, comprising:

a table memory which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means and a plurality of embedding modes to be used in the embedding means, each of the plurality of embedding modes having different robustness from each other, where the image quality and the robustness have an inversely proportional relationship;

mode selection means for manually selecting one of a plurality of embedding modes to be used in said embedding means so as to determine a robustness; ~~each of the plurality of embedding modes having different robustness from each other;~~ and

image quality selection means for referring to said table memory in accordance with the manually selected embedding mode and automatically ~~deciding~~ selecting an image quality of the image to be sensed by the image sensing means in accordance with the robustness corresponding to the manually selected embedding mode, ~~wherein the image quality corresponds to a degree of compression and the decided image quality and the~~

~~robustness corresponding to the manually selected embedding mode have an inversely proportional relationship,~~

wherein said image sensing means senses an image having the ~~decided~~ automatically selected image quality, and

wherein said embedding means executes, after said image sensing means senses an image, the embedding of the predetermined data in the currently sensed image data obtained by the image sensing means in accordance with the determined robustness corresponding to the manually selected embedding mode.

3. (Previously Presented) The apparatus according to claim 1, wherein the manually selected image sensing mode defines values associated with an exposure time and aperture of said apparatus.

4. (Previously Presented) The apparatus according to claim 1, wherein the decided embedding mode defines a value associated with a continuous-exposure frame count of said apparatus.

5. (Previously Presented) The apparatus according to claim 1, wherein the manually selected image sensing mode defines a value associated with the image quality of a sensed image.

6. (Previously Presented) The apparatus according to claim 1, wherein the manually selected image sensing mode defines a value associated with sensitivity with respect to an amount of light received by the image sensing means.

7. (Previously Presented) The apparatus according to claim 1, wherein the decided embedding mode defines a type of watermarking represented by the predetermined data to be embedded.

8. (Previously Presented) The apparatus according to claim 1, wherein the decided embedding mode defines a value associated with an embedding strength of the predetermined data.

9. (Cancelled)

10. (Currently Amended) An image sensing method including an image sensing step of sensing an object and an embedding step of embedding predetermined data in image data obtained by the image sensing step, the method using a table memory which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed in the image sensing step and a plurality of embedding modes to be used in the embedding step, each of the plurality of embedding modes having different robustness from each other, where the image quality and the robustness have an inversely proportional relationship; said method comprising:

the mode selection step of manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing step; and

the robustness selection step of ~~automatically deciding, referring to the table memory~~ in accordance with ~~the image quality corresponding to the manually selected image sensing mode, and automatically selecting a robustness specified by one of the plurality of~~ embedding modes, which corresponds to the manually selected sensing mode ~~one of a plurality of embedding modes to be used in the embedding step, each of the plurality of embedding modes having different robustness from each other, wherein the image quality and the robustness of the decided embedding mode have an inversely proportional relationship;~~

wherein the image sensing step comprises the step of sensing an image having an image quality corresponding to the manually selected image sensing mode, and

wherein the embedding step comprises the step of executing, after said image sensing step senses an image, the embedding of the predetermined data in the currently sensed image data obtained by the image sensing step in accordance with the embedding mode corresponding to the automatically selected ~~robustness corresponding to the decided embedding mode.~~

11. (Currently Amended) An image sensing method including an image sensing step of sensing an object and an embedding step of embedding predetermined data in image data obtained by the image sensing step, the method using a table memory which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed in the image sensing step and a plurality of embedding modes to be used in the

embedding step, each of the plurality of embedding modes having different robustness from each other, where the image quality and the robustness have an inversely proportional relationship; said method comprising:

the mode selection step of manually selecting one of a plurality of embedding modes to be used in ~~the~~ said embedding step, so as to determine a robustness each of the embedding modes having different robustness from each other; and

the image quality selection step of referring to the table memory in accordance with the manually selected embedding mode and automatically deciding an image quality of the image to be sensed by the image sensing step in accordance with the robustness corresponding to the manually selected embedding mode, ~~wherein the image quality corresponds to a degree of compression and the decided image quality and the robustness corresponding to the manually selected embedding mode have an inversely proportional relationship,~~

wherein the image sensing step comprises the step of sensing an image having the ~~decided~~ automatically selected image quality, and

wherein the embedding step comprises the step of executing, after said image sensing step senses an image, the embedding of the predetermined data in the currently sensed image data obtained by the image sensing step in accordance with the determined robustness corresponding to the manually selected embedding mode.

12. (Previously Presented) The method according to claim 10, wherein the manually selected image sensing mode defines values associated with an exposure time and aperture of an image recording apparatus performing said image sensing method.

13. (Previously Presented) The method according to claim 10, wherein the decided embedding mode defines a value associated with a continuous-exposure frame count of an image recording apparatus performing said image sensing method.

14. (Previously Presented) The method according to claim 10, wherein the manually selected image sensing mode defines a value associated with the image quality of a sensed image.

15. (Previously Presented) The method according to claim 10, wherein the manually selected image sensing mode defines a value associated with sensitivity with respect to an amount of light received.

16. (Previously Presented) The method according to claim 10, wherein the decided embedding mode defines a type of watermarking represented by the predetermined data to be embedded.

17. (Previously Presented) The method according to claim 10, wherein the decided embedding mode defines a value associated with an embedding strength of the predetermined data.

18. (Cancelled)

19. (Currently Amended) A computer-readable memory storing a code for executing an image sensing step of sensing an object and a code for executing an embedding step of embedding predetermined data in image data obtained by the image sensing step, comprising:

a table which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed in the image sensing step and a plurality of embedding modes to be used in the embedding step, each of the plurality of embedding modes having different robustness from each other, where the image quality and the robustness have an inversely proportional relationship;

a code for executing the mode selection step of manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing step; and

a code for executing the robustness selection step of ~~automatically deciding; referring to the table in accordance with the image quality corresponding to the manually selected image sensing mode, and automatically selecting a robustness specified by one of the plurality of embedding modes, which corresponds to the manually selected image sensing mode~~ one of a plurality of embedding modes to be used in the embedding step, each of the plurality of embedding modes having different robustness from each other, wherein the image quality and the robustness of the decided embedding mode have an inversely proportional relationship;

wherein the code for executing the image sensing step comprises a code for executing a step of sensing an image having an image quality corresponding to the manually selected image sensing mode, and

wherein the code for executing the embedding step comprises a code for executing,
after said image sensing step senses an image, the embedding of the predetermined data in
the currently sensed image data obtained by the image sensing step ~~executes embedding~~ in
accordance with the embedding mode corresponding to the automatically selected
robustness ~~corresponding to the decided embedding mode.~~

20. (Currently Amended) A computer-readable memory storing a code for executing
an image sensing step of sensing an object and a code for executing an embedding step of
embedding predetermined data in image data obtained by the image sensing step,
comprising:

a table which stores a relationship between a plurality of image sensing modes for
setting quality of an image to be sensed in the image sensing step and a plurality of
embedding modes to be used in the embedding step , each of the plurality of embedding
modes having different robustness from each other, where the image quality and the
robustness have an inversely proportional relationship;

a mode selection code for executing the step of manually selecting one of a plurality of
embedding modes to be used in ~~the~~ said embedding step as to determine a robustness,~~each~~
~~of the plurality of embedding modes having different robustness from each other;~~ and

an image quality selection ~~[[a]]~~ code for executing the step of referring to the table
memory in accordance with the manually selected embedding mode and automatically
~~deciding~~ selecting an image quality of the image to be sensed by the image sensing step in
accordance with the robustness corresponding to the manually selected embedding mode;
~~wherein the image quality corresponds to a degree of compression and the decided image~~

quality and the robustness corresponding to the manually selected embedding mode have an inversely proportional relationship,

wherein the code for executing the image sensing step comprises a code for executing a step of sensing an image having the ~~decided~~ automatically selected image quality; and

wherein the code for executing the embedding step comprises a code for executing, after said image sensing step senses an image, the embedding ~~step executes the embedding~~ of the predetermined data in the currently sensed image data obtained by the image sensing step in accordance with the determined robustness corresponding to the manually selected embedding mode.

21. (Currently Amended) An image sensing apparatus having image sensing means, comprising:

a table memory which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means and information indicating whether or not embedding is executed for each image sensing mode;

selection means for manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means;

embedding means for embedding information as a watermark in an image;

determination means for referring to said table memory in accordance with the manually selected image sensing mode and automatically determining, ~~in accordance with whether or not the image quality corresponding to the manually selected image sensing mode is lower than a predetermined quality, selected by said selection means~~, whether to activate said embedding means; and

control means for, after the image sensing means senses an image ~~when said determination means determines that the information is to be embedded~~, performing control to activate said embedding means to embed the ~~information~~ watermark in currently sensed image data obtained by the image sensing means if said determination means determines that embedding should be executed, and for performing, ~~when if said determination means determines that the information is not to be embedded~~ embedding should not be executed, control to inactivate said embedding means to prohibit embedding of the information in the currently sensed image data obtained by the image sensing means.

22. (Currently Amended) The apparatus according to claim 21, wherein the information embedded as a watermark includes information specifying a user name, an image sensing date, and an image recording apparatus.

23. (Previously Presented) The apparatus according to claim 21, wherein said embedding means comprises first embedding means for embedding information as a visible watermark in an image, and second embedding means for embedding information as an invisible watermark in an image, and

said determination means comprises means for determining one of said first and second embedding means to perform its embedding operation when embedding is to be performed.

24. (Previously Presented) The apparatus according to claim 21, wherein

said embedding means comprises first embedding means for embedding information with priority given to image quality of an image in which the information is to be embedded, and second embedding means for embedding information with priority given to robustness of the information to be embedded, and

means for determining one of said first and second embedding means to perform its embedding function when information is to be embedded.

25. (Currently Amended) An image sensing apparatus having image sensing means, comprising:

selection means for manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means;

embedding means for embedding information as a watermark in an image;

determination means for automatically determining, in accordance with whether or not the image quality corresponding to the manually selected image sensing mode is lower than a predetermined quality, whether to activate said embedding means; and

control means for, when said determination means determines that the information is to be embedded, performing control to activate said embedding means to embed the information in currently sensed image data obtained by the image sensing means if said determination means determines that the information is to be embedded, and for performing, when said determination means determines that the information is not to be embedded, control to inactivate said embedding means, wherein

The apparatus according to claim 21, wherein

said embedding means comprises first embedding means for embedding information as a visible watermark in an image, second embedding means for embedding information as an invisible watermark in an image with priority given to image quality of the image in which the information is to be embedded, and third embedding means for embedding information as an invisible watermark in an image with priority given to robustness of the information to be embedded, and

said determination means comprises means for determining one of said first to third embedding means to perform its embedding function when embedding is to be performed.

26. (Previously Presented) The apparatus according to claim 21, wherein said determination means determines, in accordance with the image quality set when a sensed image is stored in a predetermined storage medium, whether to perform embedding.

27. (Currently Amended) A control method for an image sensing apparatus having image sensing means, the method using a table memory which stores a relationship between a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means and information indicating whether or not embedding is executed for each image sensing mode; said method comprising:

the selection step of manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means;

the embedding step of embedding information as a watermark in an image;

the determination step of referring to the table memory in accordance with the manually selected sensing mode and automatically determining, ~~in accordance with~~

~~whether or not the image quality corresponding to the manually selected image sensing mode is lower than a predetermined quality selected in said selection step, whether to activate said embedding step; and~~

the control step of, after the image sensing means senses an image when it is determined in said determination step that the information is to be embedded, performing control to activate said embedding step to embed the information watermark in currently sensed image data obtained in said image sensing step if said determination means determines that embedding is to be executed, and for performing, ~~when~~ if said determination means determines that the information is not to be embedded embedding should not be executed, control to inactivate said embedding means to prohibit embedding of information in the currently sensed image data obtained by the image sensing means.

28. - 33. (Cancelled)

34. (New) An image sensing method for use with an apparatus having image sensing means, said method comprising:

a selection step of manually selecting one of a plurality of image sensing modes for setting quality of an image to be sensed by the image sensing means;

a determination step of automatically determining, in accordance with whether or not the image quality corresponding to the manually selected image sensing mode is lower than a predetermined quality, whether to activate embedding means for embedding information as a watermark in an image; and

a control step of, when said determination step determines that embedding is to be executed, performing control to activate the embedding means to embed the watermark in currently sensed image data obtained by the image sensing means, and, when said determination step determines that embedding is not to be executed, performing control to inactivate the embedding means, wherein

the embedding means comprises first embedding means for embedding information as a visible watermark in an image, second embedding means for embedding information as an invisible watermark in an image with priority given to image quality of the image in which the information is to be embedded, and third embedding means for embedding information as an invisible watermark in an image with priority given to robustness of the information to be embedded, and

wherein said determination step comprises determining one of said first to third embedding means to perform the embedding function when embedding is to be performed.